

REMARKS

Claims 1, 3-35 and 37 were examined and reported in the Office Action. Claims 1, 3-9, 16-22, 29-35 and 37 are rejected. Claim 37 is cancelled. Claims 1 and 5 are amended. Claims 1 and 3-35 remain.

Applicant requests reconsideration of the application in view of the following remarks.

I. 35 U.S.C. § 103

A. It is asserted in the Office Action that Claims 1, 3-7, 16, 17, 20, 21, 29, 30, 33, 34 and 37 are rejected in the Office Action under 35 U.S.C. § 103(a), as being unpatentable over U. S. Patent No. 5,869,208 issued to Miyasaka ("Miyasaka "), in view of U.S. Patent No. 6,717,729 issued to Gan et al. ("Gan"). Applicant respectfully traverses the aforementioned rejection for the following reasons.

According to MPEP §2142 "[t]o establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure." (*In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)). Further, according to MPEP §2143.03, "[t]o establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. (*In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)." "*All words in a claim must be considered* in judging the patentability of that claim against the prior art." (*In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970), emphasis added.)

Applicant's amended claim 1 contains the limitations of "[a] positive active material slurry composition comprising: a physical mixture of a positive active material comprising a lithiated transition metal compound, and an additive, said additive at least one of Si, B, Ga, Ge, Ca, Mg, Sr and Ba; a binder; a carbon conductive agent; and an organic solvent, wherein said positive active material composition is prepared by physically mixing said positive active material, said binder in said organic solvent in a form of slurry."

Applicant's amended claim 5 contains the limitations of "[a] method of preparing a positive electrode for a rechargeable lithium battery comprising the steps of: physically mixing a positive active material with an additive, the positive active material being selected from the group consisting of lithiated transition metals, and the additive at least one of Si, B, Ga, Ge, Ca, Mg, Sr and Ba; adding an organic solvent, a binder, and a carbon conductive agent to the mixture to prepare a positive active material slurry composition; coating the positive active material composition on a current collector; and drying the current collector coated with the positive active material slurry composition."

It is asserted in the Office Action that "Miyasaka is silent to an electrode additive of at least one of Si, B, Ti, Ga, Ge, Ca, Mg, Sr and Ba." (Office Action, page 4, second paragraph). It is also asserted in the Office Action that "Gan teaches the equivalence of aluminum and titanium metallic powder as conductive agents in cathode mixtures of lithium transition metal oxides..." Applicant's amended claim 1 contains the limitations of "an additive, said additive at least one of Si, B, Ga, Ge, Ca, Mg, Sr and Ba; a binder; a carbon conductive agent; and an organic solvent, wherein said positive active material composition is prepared by physically mixing said positive active material" and Applicant's amended claim 5 contains the limitations of "the positive active material being selected from the group consisting of lithiated transition metals, and the additive at least one of Si, B, Ga, Ge, Ca, Mg, Sr and Ba; adding an organic solvent, a binder, and a carbon conductive agent to the mixture to prepare a positive active material slurry composition." That is, Applicant's amended claims 1 and 5 have removed the limitation of Titanium from being an additive. Therefore, Gan's teaching is moot.

Since neither Miyasaka, Gan, nor the combination of the two teach, disclose or suggest all the limitations of Applicant's amended claims 1 and 5, as listed above, there would not be any motivation to arrive at Applicant's claimed invention. Thus, Applicant's amended claims 1 and 5 are not obvious over Miyasaka in view of Gan since a *prima facie* case of obviousness has not been met under MPEP §2142. Additionally, the claims that directly or indirectly depend from amended claims 1 and 5, namely claims 3-4, 16-17, 20-21 and 29, and 6-7, 30 and 33-34, respectively, would also not be obvious over Miyasaka in view of Gan for the same reason.

Accordingly, withdrawal of the 35 U.S.C. § 103(a) rejections for claims 1, 3-7, 16, 17, 20, 21, 29, 30, 33, 34 and 37 are respectfully requested.

B. It is asserted in the Office Action that Claims 1, 3-7, 16, 17, 20, 21, 29, 30, 33, 34 and 37 are rejected in the Office Action under 35 U.S.C. § 103(a), as being unpatentable over U. S. Patent No. 5,851,696 issued to Saidi et al. ("Saidi"), in view of U. S. Patent No. 6,171,729 issued to Gan et al. ("Gan"). Applicant respectfully traverses the aforementioned rejection for the following reasons.

It is asserted in the Office Action that "Saidi is silent to an electrode additive of at least one of Si, B, Ti, Ga, Ge, Ca, Mg, Sr and Ba." (Office Action, page 6, first full paragraph). It is also asserted in the Office Action that "Gan teaches that it is conventional to employ titanium conductive agents in lithium transition metal oxide positive electrodes..." (*Id.*) Applicant's amended claim 1 contains the limitations of "an additive, said additive at least one of Si, B, Ga, Ge, Ca, Mg, Sr and Ba; a binder; a carbon conductive agent; and an organic solvent, wherein said positive active material composition is prepared by physically mixing said positive active material". and Applicant's amended claim 5 contains the limitations of "the positive active material being selected from the group consisting of lithiated transition metals, and the additive at least one of Si, B, Ga, Ge, Ca, Mg, Sr and Ba; adding an organic solvent, a binder, and a carbon conductive agent to the mixture to prepare a positive active material slurry composition." That is, Applicant's amended claims 1 and 5 have removed the limitation of Titanium from being an additive. Therefore, Gan's teaching is moot.

Since neither Saidi, Gan, nor the combination of the two teach, disclose or suggest all the limitations of Applicant's amended claims 1 and 5, as listed above, there would not be any motivation to arrive at Applicant's claimed invention. Thus, Applicant's amended claims 1 and 5 are not obvious over Saidi in view of Gan since a *prima facie* case of obviousness has not been met under MPEP §2142. Additionally, the claims that directly or indirectly depend from amended claims 1 and 5, namely claims 3-4, 16-17, 20-21 and 29, and 6-7, 30 and 33-34, respectively, would also not be obvious over Saidi in view of Gan for the same reason.

Accordingly, withdrawal of the 35 U.S.C. § 103(a) rejections for claims 1, 3-7, 16, 17, 20, 21, 29, 30, 33, 34 and 37 are respectfully requested.

C. It is asserted in the Office Action that Claims 22 and 35 are rejected in the Office Action under 35 U.S.C. § 103(a), as being unpatentable over Saidi, in view of Gan and further in view of U. S. Publication No. 2001/0010807 by Matsubara ("Matsubara"). Applicant respectfully traverses the aforementioned rejection for the following reasons.

Applicant's claim 22 directly depends on claim 1. Applicant claim 35 directly depends on claim 35.

Gan is relied upon for teaching it is conventional to employ titanium conductive agents in lithium transition metal oxide positive electrodes. Applicant's amended claim 1 contains the limitations of "an additive, said additive at least one of Si, B, Ga, Ge, Ca, Mg, Sr and Ba; a binder; a carbon conductive agent; and an organic solvent, wherein said positive active material composition is prepared by physically mixing said positive active material" and Applicant's amended claim 5 contains the limitations of "the positive active material being selected from the group consisting of lithiated transition metals, and the additive at least one of Si, B, Ga, Ge, Ca, Mg, Sr and Ba; adding an organic solvent, a binder, and a carbon conductive agent to the mixture to prepare a positive active material slurry composition." That is, Applicant's amended claims 1 and 5 have removed the limitation of Titanium from being an additive. Therefore, Gan's teaching is moot.

Since neither Saidi, Gan, Matsubara, nor the combination of the three teach, disclose or suggest all the limitations of Applicant's amended claims 1 and 5, as listed

above, there would not be any motivation to arrive at Applicant's claimed invention. Thus, Applicant's amended claims 1 and 5 are not obvious over Saidi in view of Gan and further in view of Matsubara since a *prima facie* case of obviousness has not been met under MPEP §2142. Additionally, the claims that directly or indirectly depend from amended claims 1 and 5, namely claims 22, and 35, respectively, would also not be obvious over Saidi in view of Gan and further in view of Matsubara for the same reason.

Accordingly, withdrawal of the 35 U.S.C. § 103(a) rejections for claims 22 and 35 are respectfully requested.

D. It is asserted in the Office Action that Claims 1, 3-9, 16-19 and 29-32 are rejected in the Office Action under 35 U.S.C. § 103(a), as being unpatentable over U. S. Patent No. 6,589,694 issued to Gosho et al. ("Gosho") and further in view of Gan. Applicant respectfully traverses the aforementioned rejection for the following reasons.

Gan is relied upon for teaching it is conventional to employ titanium conductive agents in lithium transition metal oxide positive electrodes. Applicant's amended claim 1 contains the limitations of "an additive, said additive at least one of Si, B, Ga, Ge, Ca, Mg, Sr and Ba; a binder; a carbon conductive agent; and an organic solvent, wherein said positive active material composition is prepared by physically mixing said positive active material" and Applicant's amended claim 5 contains the limitations of "the positive active material being selected from the group consisting of lithiated transition metals, and the additive at least one of Si, B, Ga, Ge, Ca, Mg, Sr and Ba; adding an organic solvent, a binder, and a carbon conductive agent to the mixture to prepare a positive active material slurry composition." That is, Applicant's amended claims 1 and 5 have removed the limitation of Titanium from being an additive. Therefore, Gan's teaching is moot.

Since neither Gosho, Gan, nor the combination of the two teach, disclose or suggest all the limitations of Applicant's amended claims 1 and 5, as listed above, there would not be any motivation to arrive at Applicant's claimed invention. Thus, Applicant's amended claims 1 and 5 are not obvious over Gosho in view of Gan since a *prima facie* case of obviousness has not been met under MPEP §2142. Additionally, the

claims that directly or indirectly depend from amended claims 1 and 5, namely claims 3-4, 8, 16-19 and 29, and 6-7, 9, and 30-32, respectively, would also not be obvious over Gosho in view of Gan for the same reason.

Accordingly, withdrawal of the 35 U.S.C. § 103(a) rejections for claims 1, 3-9, 16-19 and 29-32 are respectfully requested.

CONCLUSION

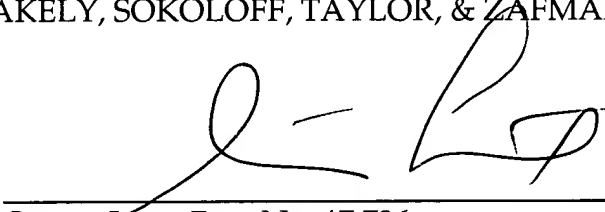
In view of the foregoing, it is submitted that claims 1 and 3-35 patentably define the subject invention over the cited references of record, and are in condition for allowance and such action is earnestly solicited at the earliest possible date. If the Examiner believes a telephone conference would be useful in moving the case forward, he is encouraged to contact the undersigned at (310) 207-3800.

If necessary, the Commissioner is hereby authorized in this, concurrent and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2666 for any additional fees required under 37 C.F.R. §§1.16 or 1.17, particularly, extension of time fees.

Respectfully submitted,

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I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail with sufficient postage in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P. O. Box 1450, Alexandria, Virginia 22313-1450 on December 27, 2004.


Jean Svoboda